

SUPPLEMENT.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1093.—VOL. XXVI.]

London, Saturday, August 2, 1856.

[GRATIS.

Meetings of Public Companies.

MEXICAN AND SOUTH AMERICAN COMPANY.

An annual meeting of proprietors was held at the London Tavern, Bishopsgate, on Friday, and was very numerously attended.—Mr. J. D. POWLES in the chair.

Mr. HYDE CLARKE (the secretary) read the notice convening the meeting, and the following, from which we condense the following:—

The directors have now to present to the proprietors a report of the company's proceedings during the past year, which has been to them one of great care and harrassment in the management of the company's affairs. The directors have been under the necessity of making an entire change in the management of the company's affairs in Chili, by the removal from the superintendence thereof of Mr. Alison. Speaking of this gentleman's conduct and proceedings, the directors necessarily in his absence, will endeavour carefully to avoid doing more than giving an account of his proceedings, and of the impression produced thereby on their minds. Previous to their entertaining any idea touching the change that was to take place in the management of the company's affairs in Chili, the directors were to the determination to appoint an assistant superintendent to accompany Alison. Their motives for it were numerous, but it will here suffice to notice two. That the interests of the company had attained that magnitude in Chili as to be inexpedient, for proper safety, to have a representative on the spot, ready to charge, in case of death, absence, or any other casualty that might happen to Alison.

That they had found great want of accuracy and precision, calling for an immediate, in all the accounts and estimates that were rendered to the board from observing, as they did, that so often as the explanations were asked the question was evaded, or short data given—so much so, that the directors had naturally come to the conclusion that (supposing a loyalty of purpose and intention) great irregularity and deficiency of system must have prevailed there. Accordingly, the directors made an engagement with Mr. Philip Edward Barnes to proceed to Chili as superintendent, for which purpose he qualified himself by passing several months at copper smelting-works in Wales, to which the directors were allowed access where he made himself acquainted with all the details of the smelting process; and in London he went through the whole of the correspondence connected with the company's affairs, and those accounts and estimates which required his attention, so as to might arrive in Chili with a full knowledge of all antecedent circumstances connected with the company's affairs, and also with a knowledge of the manner in which the business of smelting ore is carried on in England, and the returns, &c., &c. Mr. Barnes, being thus qualified, left England for Chili by the packet in middle of October; but, previously to dispatching him from England, events had rendered it necessary for the directors to appoint him superintendent, and to put an end to their agreement with Mr. Alison.

Other grounds of dissatisfaction which had arisen in the minds of the directors to Alison arose from the circumstance of their having perceived that he was acting business on his own account, in the purchasing and shipping of ores for parties on commission, to a considerable extent. This business was carried on by the company's establishments, with its chemists, samplers, officers, and men, with its wharves and yards, and the convenience of the company's bankers as well, had been the business of the company; but the commissions and emoluments not credited to the company, but received by himself, though latterly divided among best known to himself with one, and occasionally two, of the officers of the company. The board, therefore, addressed to Mr. Alison on June 1, last year, of which the following is a copy:—

—In the course of examining the accounts for 1854, the attention of the board, from time to time, has been called to entries representing commissions paid to yourself and other officers of the company, a list whereof, as extracted from your books, is enclosed, amounting to £7792 2s. These entries have taken the board much by surprise, and their duty to the company compels them at once to say that they cannot in any manner sanction these payments, and to request that the amount of them, or other that may have been made on the like account, be paid to the company. The board consider that nothing can be more objectionable, on principle, than for parties engaged in the service of the company abroad to be deriving profits from on other business. The board have never sanctioned it in any way, and it is a clear variance with the conditions of your own engagement with the company, which extends alike to every agreement with every other person in the company's employment. Even if it were not precluded by express agreement, it is the clearest principles of equity. The company engaged the whole of the time services of the parties in their employment, and no person so engaged has the right to abstract any portion of those services from the company for his own benefit. The company's position at Herradura gives facilities for carrying on the business of buying ore and copper on commission the board can easily believe, and that company should profit by the opportunity of earning such commission, as an advantage to its position, is just and proper; but that such profit should go to the hands of the company's employees the board cannot admit to be just, on any account that can be suggested. It might be fairly urged on your part, as superintendent, that as this was a new and unexpected branch of business that had offered itself, and as it devolved additional labour and responsibility on you, it would be reasonable to make you an additional remuneration out of it. But the constitution of the company provides for this beforehand, as no profit can be made by the company from any source without you participating therein. In like manner, if this business imposed any increase of labour upon your establishment, might indeed furnish a motive for increasing its strength, but none for invading the principle of any of the agreements; but that there has been no such deficiency of strength in the official department, is proved by the business having been actually carried on by the company's servants, without any inconvenient pressure being felt from the board, cannot but express a deep sense of disappointment and regret that transactions should have taken place, without any previous communication or consultation therewith the board. That these commissions have been earned at the expense of the company's position, giving the opportunity to you, as superintendent of the company, to make the purchases in question. The board convinced you that you will, on due reflection, see that there is no ground on which an appropriation can be sustained, and that you will rectify the same at once. The board likewise deem it necessary to call upon you to furnish them with a statement of the commissions earned, distinguishing those antecedent to December, 1853, and those subsequent to that date.—J. D. POWLES, Chairman.

Mr. Alison replied by entirely refusing to refund the commissions which he had appropriated.

The directors, on the receipt of this reply, took advice from eminent counsel as to whether they were entitled to pursue towards Mr. Alison, who stated, without reference to his agreement, an entire breach of his agreement, such as justified the directors in giving him immediate notice of its termination, but that if it was his intention to set upon it, it was necessary that they should give him his discharge at once. Other grounds of dissatisfaction had besides arisen in the minds of the directors as regards Mr. Alison. It had been the practice of Mr. Alison, at the end of each year, to transmit to the board a report, which professed to give a minute detail of his proceedings, and which was accompanied by an analysis of the cost of copper from the ores, and the charges of working, and which showed a large aggregate profits. On these statements the directors acted, and each yearly meeting declared dividends accordingly.

The directors, however, having discovered several discrepancies in these accounts, and desirous to place the whole of them, to December 31, 1853, in the hands of an accountant (Mr. Moates) for investigation and report. This investigation proved to be of so much labour and complication that the report was not delivered to the board until the beginning of last year. This report set forth many discrepancies and statements in the accounts, and, in particular, proved—first, that the cost of copper had been understated; and, secondly, that the quantity of copper which had been produced from the ore purchased had not been realised, and consequently that there had been a greater loss sustained in the manufacture, by slags, than had been represented; and, thirdly, that the consumption of coal had been greater than it had been stated at. A copy of the accountant's voluminous report on these matters was forwarded to Mr. Alison on May 16 last year, with a request that he would reply to the several matters contained therein; but, instead of satisfying the enquiry, he has found it more convenient to assume a tone of offence and retort, for which not the slightest cause was given, with a view it would seem, to stifle the subject from its course, and to stifle the enquiry altogether. In this state, the matter still rests.

Other grounds for dissatisfaction which had arisen in the directors' minds among others.—The erroneous statements gratuitously made by Mr. Alison as to the consumption of copper in smelting at Herradura, which he represented as very small, which the directors had ascertained to be considerable and wasteful. Moreover, that all the officers of the company, except one, were relatives or creatures of Alison, and that they were most of them in debt to the company, without the knowledge of the board, and were engaged in unauthorised pursuits, contrary to their interests. The unfounded statements made as to Mr. Frederick Field's silver mine, which the board were urged to believe was fully successful at a time when it was notorious that it was a complete failure. What motive there could have been in this, until the very last moment, in so grossly and wilfully misrepresenting the facts, which was decidedly a failure, the directors are at a loss to imagine; the fact that both Mr. Alison and Mr. Field still persist in calling what is notorious

grossly proved to be a failure a signal success, only goes to show what reliance is to be placed upon any statement from those gentlemen when they have private considerations to influence them.

On looking into the state of affairs at Herradura, Mr. Barnes found that Mr. Alison was engaged in the formation of a rival establishment in the neighbourhood of the company's works; that Mr. Alison had, as representative of the company, cancelled the agreements of the chemist, book-keeper, clerks, overseer, foremen, masons, mechanics, and the best smelters in the employment of the company, and had entered into agreements with them himself for his new company; that he had cancelled the contracts with the miners supplying the establishment with ores, and appropriated them to himself for the remainder of the term; and had, moreover, informed them, and every one, that the company's establishment was to be closed and wound-up, and that he would carry on the business himself. It further appeared that the company's bricks and other materials had been abstracted from the company's premises, and appropriated to the building of the new works which Mr. Alison was then engaged in constructing.

One main source of the error in Mr. Alison's statements has proceeded from his not having made it a point accurately to ascertain the loss of copper he sustained in the slags during the several years' working. Mr. Alison had throughout represented the loss in slags as very trifling, and in one year he went so far as to attempt to show that he had actually produced more copper than he had paid for in the ore. Mr. Alison stated that he had all along kept an accurate check on the slags, and latterly, upon the repeated insistence of the board, did forward statements and reports from the chemist, to that effect, which the directors regret exceedingly to say they have now ascertained to have been wholly destitute of foundation. It is, in short, proved that no regular or proper test of the slags was ever maintained, and, as evidenced by the slag thrown away in former years instead of $\frac{1}{2}$ per cent., or less, as reported by Mr. Alison, the loss, as proved by the tests since made by Mr. Barnes, has been 2½ per cent. What the present case suggests is gross negligence on the part of Mr. Alison, for had he kept up a regular system of tests of his workings he could never have committed such mistakes as these.

By the balance-sheet, it will be seen that the company's outlay in Chili on Dec. 31 was—At Herradura, 194,685/-; Caldera, 109,697/- The statement of the stocks on hand at both establishments, together with all other particulars, are on the table, but as they necessarily comprise considerable details, rendering it impracticable for the shareholders to examine them at this meeting, they will, together with the whole of the correspondence which has passed with Mr. Alison, be open at any time to the inspection of any of the shareholders who may choose to call at the company's office for that purpose. In the midst of these discouraging circumstances, it is a great satisfaction to the directors to be able to state that the company's establishment at Herradura is now in an effective working condition, more so, even, than it has ever been before. The make of Mr. Barnes since he has got into full work contrasts very advantageously with the performance of his predecessor. Indeed, the order and regularity introduced into the general system of working, the moral conduct and contentment of the people, and the substantial economy in the cost of labour as compared with the quantity of work turned out, already testify, in a still more striking manner, the superiority of the present over the former state of things. Mr. Barnes has had, and still has, great difficulties to contend with in the state of circumstances which surrounded him on all sides. He has, nevertheless, so far met these difficulties with a vigour and decision which have inspired the directors with the highest confidence in his administrative capacity.

In reference to Caldera, the directors state that Mr. Field was over and over again called upon by the board to furnish specific and complete details of his working, but they seldom got anything more from Mr. Field than a message, such as being too busy then, he would write fully by the next mail. Upon two or three occasions he did write, but each time the packet sailed before he had completed the treatment of the remains of the trial he had in hand, or so, at least, has he upon each occasion taken the opportunity to state it. The next mail, it was to be expected, would bring an account of the final issue, but nothing of the kind ever came forward. This mode of proceeding on the part of Mr. Field gave the directors the greatest umbrage and dissatisfaction, and finding, as they did, that they could neither rely on the accuracy of any of Mr. Field's representations, nor any longer entertain confidence in his management, they determined to suspend the purchase of silver, and to terminate his agreement with the company.

It was not till the last moment the directors felt that their duty to the company compelled them wholly to withdraw their confidence from Mr. Alison. Events have shown that their decision was not taken one day too soon. It is neither necessary nor expedient for them to make any further reference to Mr. Alison's proceedings, nor to any questions existing between him and the company, inasmuch as legal proceedings have already been instituted therein in Chili. Only one remark will they make, and that is, that the single circumstance of Mr. Alison having taken the bricks and materials of this company to build furnaces for a rival establishment (when there was an express inhibition to his selling any of the company's materials), is, in the judgment of the directors, a most grievous and disgraceful abuse of his trust, for which no conceivable excuse or justification can be found. Unfortunately, no vigilance on the part of the directors could have guarded against such an event.

To the future, the directors have every reason to look with considerable confidence. The establishment at Herradura they consider to be in better working order now than it has ever been before. They have taken care to supply Mr. Barnes with all needful assistance. The recent fall in the price of copper in England is, of course, for the moment disadvantageous, but it is to be expected that it will be met by a corresponding reduction in the price of ores in Chili, where the prices had necessarily advanced with the advance which took place on this side in the price of copper. The directors can, with all safety, say that there is no establishment in Chili that can produce copper cheaper than that of the company at Herradura, for the simple reason that none can be better or more economically served with the elements to render it efficient.

The CHAIRMAN said, after the report had been read, in order to give the shareholders an opportunity of asking any questions, he would move that the report and balance-sheet be received and adopted.

Mr. JACOBS said he had paid great attention to the report, and a more unsatisfactory statement he had never heard, showing, as he considered, a gross dereliction of duty on the part of the directors, such as he had never heard laid before any meeting.

The loss might not be of much object to him, but there were many poor persons who had worked hard for those money and invested it in this undertaking, and it was the interest of those he advocated. He believed the whole of their directors were men of great respectability, and he did not intend any personal reflection on them, but shareholders were entitled to know the exact position and operations of the company, whether the directors had discharged their duties, and whether, if a proper supervision had been exercised over their affairs, they would have been in the present state. The report itself condemned them, for as that very report showed the attention of the directors was called to the improper doings of Mr. Alison as far back as 1853, and yet at this time last year they declared the same dividend, of 7s. 6d. per share, without giving the slightest intimation of what was going on, which he considered was not fairly discharging their duty to the shareholders.

He believed the board of directors was composed of gentlemen who were too intimate with the Chairman, and left too much in his hands, thus placing too much under one influence; and when they found that members of that board were mixed up in partnership with the Chairman, he believed the shareholders would agree with him that it was time some new blood should be infused into it. Mr. Ward was upon the present occasion seeking to be re-elected, and though he had not the pleasure of knowing him, from all he had heard of him, a more independent gentleman did not exist, and to him they were greatly indebted, as it was since he had been a director these discoveries had taken place, and been brought to light. This showed the advantage of introducing new blood.

It was impossible to read the report without thinking that some years back an alteration ought to have taken place. It appears that the superintendent got almost every man over to him, and he would ask the meeting whether they thought he could go on in that manner without the knowledge of the directors? It was evident from the report that in May, 1853, they knew of the improper proceedings that were going on in Chili, and yet they declared a dividend in July, 1855, without telling one word to the shareholders. He would ask, was it fair at that time to pay the dividend? It was stated in the report that shareholders could come to the office and inspect the correspondence and accounts, but if the conduct of the directors was above-board they would not object to the appointment of four or five shareholders as a committee of investigation to look into the accounts, and in moving for such a committee he hoped their report would add honour to the directors. If, too, it was found that more capital was required, he hoped the shareholders would rally around the directors and subscribe it. He would conclude by moving that seven gentlemen be elected as a committee of investigation, with power to call for all papers and documents, and that the directors be requested to give them every assistance.—The resolution not having been seconded, he moved that the report and accounts be received and adopted.

The Rev. Mr. NEWNHAM addressed the meeting in a speech of considerable length. He was amused to hear that they had paid too much in dividends; it was not a general complaint with shareholders. He certainly hoped that the board would have decided upon issuing debentures, by which means parties unable to meet the call would be relieved. It had been complained that the directors did not know what was going on in Chili, but they must consider the distance, and that it took time to detect the fallacies.

Mr. BLANDFORD never heard a report read so strongly condemning the board for their inertness. It was proposed to call in further capital, though they admit they were aware in 1853 that they were being misled, and yet in Jan., 1855, they came forward and stated it would be a great advantage to increase the capital 65,000/- Did the directors mean to say there was not then some misgivings as to the working of the company? Could any one put his hand to his heart and say it was a justifiable way of going on? He did not charge them with connivance at the fraud, but he did charge them with

gross neglect and great inertness; however, with regard to a committee of investigation, he did not expect any good would result from the appointment, and he would rather trust to the directors, if they would acknowledge their fault. There was another point to which he would allude: he considered it most unfair that the directors did not apprise the shareholders to some extent of the mischief they knew was going on, and thus give all parties an opportunity of getting rid of the shares.

The CHAIRMAN said no one could have expected the meeting to pass over without very strong observations. When dividends were paid there were none so good as dividends, and when no dividends were paid no persons so bad, and yet when dividends were not paid there was often the greatest amount of labour on the directors. He could assure them this was one of the most laborious companies to manage, and the directors were obliged to devote to it the same attention as to their own private concerns.

From what had been said, he had been looking to some specific charge, in order that he might answer it, on behalf of his brother directors and himself. They were accused, it is true, of not letting the proprietors know what was going forward. There was also another curious and unusual charge—that they had paid too much in dividends.

Until they had secured the property in Chili, it would have been the height of imprudence to have said one word about the measure in proposal. With respect to the accounts, they would find every line wounded, and although there might be some difficulty in going into every minute detail in a report, every letter, whether written by the directors or received by them, was open to the shareholders for inspection in the office. Mr. Alison was absent, and it might not be fair to say much against him; but this he would say, that in the whole course of his long experience with companies abroad he had never heard of proceedings like this—in using the bricks of this company in constructing his own furnaces. They did not know this until recently, and when they heard he was carrying on a commission business, means were immediately adopted to get rid of him. It had been suggested that they ought not to have called for additional capital, but he must remind the proprietors that in four years he had paid upon the whole working capital 70 per cent. dividend, or equal to 17½ per cent. per annum, and if the accounts could be seen, it would be found out of those additional shares it was not the smallest number taken by the board, and it could not be said that they placed the bright side without the dark one before the shareholders.

Mr. DAVIDSON wished to know whether, assuming all the call was paid up, it would fully accomplish all the directors required?

The CHAIRMAN answered in the affirmative, and as a proof of the benefit of having sufficient capital, he would inform them that for advances made in Chili they had to pay 17½ per cent. per month, and in addition a commission.

Mr. SCHNEIDER assured the proprietors that, to a very large extent, the additional capital proposed would do away with those charges.

Mr. SPENCER HERAPATH wished to know whether the capital was intact?

The CHAIRMAN said it was.

A SHAREHOLDER having seconded the motion of Mr. Jacobs,

Mr. W. WILSON said he was a large holder, and had paid 6/- each for his shares. His friends also held a very large interest in the company, and were quite ready to pay the call, and he firmly believed that nothing would damage it more than the appointment of a committee of investigation.

Mr. JACOBS said, that when he was told by the Chairman and other proprietors that his resolution would be prejudicial to the interests of the company, he should at once withdraw it. (Cheers.)

The report and balance-sheet were then unanimously adopted, and Mr. Ward re-elected director, amidst much applause.

Mr. JENNINGS saying he had been a large shareholder for many years, and had called at the office after the arrival of every mail: every document was laid before him, and he could testify that both Mr. Ward and Mr. Ranking gave unremitting attention to the interests of the company. (Hear, hear.)

Mr. GODDARD moved a vote of thanks and confidence to the directors, which terminated the proceedings.

AUSTRALIAN MINING COMPANY.

The eleventh annual meeting of the company was held at the London Tavern, on Monday.

Mr. R. F. DAVIS in the chair.

Mr. WALFORD (the secretary) read the notice convening the meeting, and the minutes of the last, which were confirmed.

The report of the directors congratulated the shareholders on the improved position of the company in public estimation. At Tungkillo, Mr. Forster having driven about 5 fms. in the 67, found the results unsatisfactory, and, therefore, acting upon the instructions of the board, he very properly decided on discontinuing all operations below the adit level. The pumps, and other articles of value below the adit, were brought to surface. He had since prosecuted only operations of actual necessity, or employed men working on tribute. The directors had been led to hope that after the abandonment of the deep workings at Tungkillo some quantities of ore might have been found in the upper workings, and raised on tribute; but they regret to say that Mr. Forster, writing under date March 19, says that only about 23 tons have been thus raised, and he fears that there is not sufficient inducement for miners to continue any longer at tribute work. In the last report it was named that Mr. Forster was preparing to ship about 95 tons of ore; the ore was shipped in December last, 61 tons were sold at Swansea, on June 4th, for 1038/- 17s. Of the remainder, 31 tons were sold on the 22d of the present month, and a further amount of about 6 tons will follow a few weeks later. Mr. Forster removed from Tungkillo to the Charlton Mine in January last, and in the course of that month he commenced breaking ground. The report then concluded with the letters received from Mr. Forster, the substance of which have, from time to time, appeared in the *Mining Journal*.

The following statement of the company's assets and liabilities, so far as can be accurately ascertained, is made up to July 17. Assets—Money at call, 2500/-; cash at bankers, 665/- 1s. 2d.; ore sold, 1038/- 17s.; ditto unsold, 630/-; outstanding, 1232/- 10s. = 6086/- 8s. 2d.—Liabilities—Acceptances to date, loan, notes, 750/-; colonial drafts, July to Sept., 160/-; sundries, 25/- = 2375/- The cash account to June 14 showed a balance at bankers of 959/- 9s. 7d.; petty cash, 14/- 2s. 10d. = 975/- 12s. 5d.

The CHAIRMAN, in moving the adoption of the report and accounts, said he could wish that it had been more favourable, but at Tungkillo they have proved that the ore was only in pockets, and they had never found a continuous vein. It was a relief to the directors to inform the meeting that the agents had followed their instructions, and discontinued the work. The board had hoped from the letters received that large quantities of ore would have been raised on tribute from the upper workings, but the man had given up, finding the profits were not so good as they could get elsewhere. Indeed, after working for six weeks, instead of getting from 100 to 150 tons, they only raised 28. The board had since written to Mr. Davenport and Mr. Forster, for their opinion as to the best course to be adopted with Tungkillo—whether it should form the nucleus of a land company, or they should dispose of the property? He (the Chairman) was not in favour of a land company; but upon receiving answers from Mr. Davenport and Mr. Forster, the shareholders would be called together to decide upon what course to pursue. There was one point to which he would allude, of some importance: several of the shares had lately changed hands, and the largest buyers were parties connected with the colony. He had received, this morning, advice from Mr. Forster to April 16, which, as it gave a full account of the working to that date, he would read. (He (the Chairman) then read the following letter:—

"Chairman.—On our leased land we have set two winzes to sink on the course of each branch, and the men are now preparing the tackles to commence. Yesterday, in opening further on the course of the easternmost branch, we broke as fine stones of the blue and green carbonates as I ever saw. In the bottom, which is only about 6 ft. under surface, the ore is better, and the branch more regular than above. We intend to sink both winzes to water level, which will be between 5 and 6 fms., and thence drive each way on the course of the branches, and also in opposite directions as cross-cuts. Independent of the two branches, which are of an average thickness of 8 in., and one of them very solid, the country, which is of a soft brownish killas, is in the vicinity of these branches very much mixed up with ore, so much so as in some places to be worth saying; the ground can be driven for about 28s. per fm., including all costs. At this place I expect we shall very shortly have to put up a whim, so as to get down to about the 20.

He (Mr. Coxhead) then indulged in a violent attack against the party alluded to, much to the amusement of the meeting. He contended that they were bound, hand and foot, to pay 20/- per share. The report congratulated them upon the improvement of the company in the public estimation; but that merely arose through not being called upon for more money. There was no improvement in the old property, and he believed nothing in the new; yet they were going to pursue the same system of sinking shafts.

A PROPRIETOR considered it would be quite premature to think, at the present time, of winding-up, but they might keep the question before them. He wished to know how many shafts were sinking?—The CHAIRMAN replied, only two wins.

Mr. JAMES HIRSCHEN said these wins were sunk by hand, and might merely be called trial shafts.

A PROPRIETOR hoped the operations would be carried on carefully, and having due regard to the pockets of the shareholders. If they did not go to enormous expenses, the mines ought to have a fair trial.

Mr. JAMES HIRSCHEN observed that he had seen the last advices from Mr. Forster, and as far as he could gather, the operations were being properly conducted. They could not open ground and discover copper ore without expenses, and sometimes amounting to a great deal; however, from what he had seen, he believed they would open this ground cheaply. There appeared to be an analogy between their property and the Burra Burra, and he warned them not to lose the ship for a pennyworth of tar.

After some discussion, the report and accounts were unanimously adopted, and Messrs. C. Downes and H. R. Wotton were re-elected directors. The sum of thirty guineas was voted to the auditors for the past year, and the proceedings terminated with a cordial vote of thanks to the Chairman and directors.

COLOGNE MINING COMPANY.

A general meeting of shareholders was held at the London Tavern, Bishopsgate, on Thursday, Col. J. G. W. CURZIS, C.E., in the chair.

The CHAIRMAN said, that if it met with the approval of the shareholders he would nominate Mr. J. R. Lattey the secretary of the meeting, and having read the advertisement convening the meeting, inserted in the *Times* and *Mining Journal*, called upon Mr. Neissen to read the notice inserted in the German journals, which he did. The *process verbal* of the last meeting was read and confirmed.

RECEIPTS.

Balance last account	£2,024 14 2
Calls received	6,980 10 0
Ores sold, from Rahrbacherhöhe, Cöllia, Bilbach, and Vahlberg Mines	1,225 13 9
Interest, transfer fees, &c.	54 8 2
Gustav Huland, cashier and representative	462 1 0
Wm. Hennes, representant	90 3 11
A. Neissen, avocat, balance due to him	16 6 6
J. R. Whyte, inspector, ditto	2 16 9
Balance paid by late gerant before Oct. 31, 1855	188 3 0
Total	£11,044 17 3

EXPENDITURE.

Disbursements in London	£1,353 14 6
" Cologne and Elberfeld	32 5 10
" Derschig, &c.	22 8 5
" Brussels	167 15 7
William Illig, Cologne, in hand	3 0 0
Colonel Curtis, Brussels, in hand	18 0 5
Disbursements on the Mines of Fabrenberg, Rahrbacherhöhe, Christiane, Cöllia, Bilbach, Flora, Alte Kupferkuhle, James Watt, Gute Heinrich, Vahlberg, Voigtskaule, and various mines under G. Huland and W. Hennes	5,487 7 2
Balance due by G. W. Hodgeskin, late gerant	1,741 7 7
" in London and Cologne:—	
Deposit at call with London and Eastern Bank	£800 0 0
Balance with ditto	756 17 9
Ditto with A. and L. Camphausen, Cologne	349 7 4
Ditto of petty cash	22 12 6
Total	£1,928 17 7

The directors think it their duty, in the first place, to state to you that they have not given to the works the extension they intended, as they did not think themselves justified in erecting engines on more mines of the company, on account of many of the shareholders not having paid their calls. You know under what circumstances we engaged to continue our functions after you had recognised the civil nature of our company, which had for its object the working of our own mines. The question was not only to prevent those mines from becoming again Crown property. In consequence of the suspension of the works, but also to prevent those mines from being seized and sold by creditors holding mortgages upon them, and by those who had recently obtained judgments against our company for debts contracted by the late gerant. You decided, at your general meeting on January 4 last, that a call of 4/- per share was indispensable to prevent those fatal consequences; this call ought to have produced 10,608/-, but it only produced 6,656/-, &c. The shareholders who did not vote for the measure, or who did not attend at the meeting, have not paid the calls, and have, consequently, not contributed to preserve the property of the company, notwithstanding that we addressed to them three circulars, in which we made known the impending danger of the situation of the company, and forewarned them that it would be necessary for the protection of those shareholders who had paid their calls to procure the forfeiture of the shares of those who had not paid, as required by the Prussian law. We have not thought proper at present to call upon the holders of reserved shares to pay the call, for it would be injuring the original shareholders to admit the reserved shareholders to profits until the original shareholders receive 10 per cent. This measure ought only be resorted to in the last extremity. We have disposed of your funds according to the accounts, which have been submitted to you. We do not regret that the works have not been forwarded more energetically, for the minerals are still in the bosom of the earth, and in two years an excellent railway, which will pass near the mines, will greatly reduce the cost of coals, and enable us to extract our minerals at less cost than at present, and to sell them at great profit.

Since our last meeting, the directors, Messrs. Moeller, Illig, Raub, and our Chairman, have been several times to the mines, the two latter going in the month of June, accompanied by Mr. Fachamp, an eminent Belgian engineer. They had the satisfaction to hear from that distinguished man, in the presence of, and confirmed by, the district geschworenen, Mr. Fabrelius, the most highly favourable character of the mines. At our last meeting, you manifested a desire that no forfeitures should be pronounced, and, in deference to your wishes, we had recourse to no other means than those of persuasion. Though you are, in fact, in possession of the mines, the legal rights of W. Jessen and Co., or of W. G. Hodgeskin and Co., are not yet extinguished. We must, however, tell you what is your present legal position with respect to shareholders in arrear, who seem determined to remain so, and refuse their concurrence, and may assume an aggressive aspect, and demand a winding-up of the company. Fortunately, we can reject the winding-up, according to the terms of the second article of the Prussian law of May 12, 1851, which says, "Companies of this nature cannot be dissolved, even should there be only one who objects to the dissolution." We have, therefore, only to perfect our organisation as a gewerkschaft to continue to act on the defensive; but we think that the time is come to take the offensive, and to prepare for the opening of the railway, and the advantageous sale of our minerals. It is now necessary that all calls should be paid up, in order to complete the works. To attain this object, we must from this moment perfect our organisation as a gewerkschaft at the bergamt of Siegen, and force the persons in arrear, according to the manner used by the ordinance and laws in force in Prussia, either to contribute in proportion to their respective shares to our expenses, or to be declared by the bergamt to have forfeited all right of property in the mines. We must repeat that our company was constituted in Prussia, and has for its object the working of mines in Prussia, and is, consequently, governed by the laws of that kingdom. By these laws, the mines are only conceded for the benefit of the State and of the shareholders, on the condition that the latter work them without interruption, on pain of forfeiture. Each mine is divided into 128 parts or kuxes for the grantees; each kux is susceptible of a subdivision into eight 1-1024ths. No shareholder can be registered at the bergamt if he possesses less than 1-1024th of the part belonging to the grantees of his kux. Any shareholder who may have a right to a part less than 1-1024th must sell it to one of the co-proprietors of his kux. No one can be forced to contribute to any expense which he has not sanctioned. Any one who refuses to contribute to expenses required by the bergamt to be just will forfeit his right.

When mines belong to several proprietors, they must name a person to represent them in the bergamt. So you have only the mines to guarantee the repayment of principal and interest of the 44 advanced; you have no hold upon the shareholders, who have refused tacitly or expressly to contribute to these expenses; but, in future, when the outlay which may be made out of the funds which shall be received on your account, arising from the sale of minerals extracted with your money, you will doubtless require that the persons who expect future advances from the works should also join in the adventure, and advance the same sum as you do.

We consider that our organisation in gewerkschaft is no impediment to your continuing, with respect to your board of directors, to dispose of your parts in the form of shares, in the manner upon which we shall agree when the mines have been divided into portions or kuxes, when the forfeitures have been pronounced—when, in a word, we can state precisely our respective parts. In the meantime, those who have paid the 4/-, or who offer to pay them, may continue to dispose of their shares as heretofore, and give us notice of the transfers; we will watch over the preservation of their rights. We are in no way bound towards those who refuse you their concurrence. In conformity with the desire manifested by a great number of parties interested, the board of directors will hand to you a transferable certificate, which will entitle you to be paid that sum from the produce of the minerals; or, in case of dissolution, from the proceeds of the sale of the mines, as a debt. In order to facilitate our communication with the representatives of our mines, and in a more effectual and permanent manner to watch over your interests, we have appointed Mr. Whitley Inspector at Derschig.

We think it necessary, in consequence of the defaults of a great number of our co-proprietors, to restrict our outlay—1. To the expenses strictly necessary to prevent for future of our mines. 2. To the expense of extraction in proportion to our profitable mines, so as not to accumulate a stock of minerals, but to be able, by the proceeds of such sales, to defray the necessary expenses of working our other mines, without again making a call.

Pray do not forget that the proceedings of your meeting must, by law, be communicated to the Prussian authorities, and especially to the bergamt of Siegen, and to the Oberbergamt of Bonn, and that they must be signed by all shareholders present at this meeting, in conformity with a circular issued by the Prussian Government on March 29, 1856. Our faith is unshaken in the ultimate success of our enterprise. If we conform strictly to the mining laws of Prussia, and we believe the results of our labours must entirely realise our expectations, and reward the exertions made for the common interest of the company.

The CHAIRMAN said they had now before them the result of their operations for the last six months; all the difficulties had been encountered, and the operations they had carried into effect. He had to congratulate the shareholders who had supplied the funds for the redeeming of the mines from forfeiture to the Government, but it was now time that the shares of those who had failed to pay their proportion should be forfeited. It was true that they had arrived at what he might call a successful issue; but it should be borne in mind that such results could not have been obtained without the co-operation of the shareholders. The result of their operations continued to improve, and he considered the mines generally were in a fair position for increasing their profits. They were much indebted to the courtesy and support they had received from the Prussian authorities, from Mr. Von Dagen, Oberbergrath, of Bonn, who might be considered the Murcian of the Continent; this gentleman, together with Mr. Bokhoff and others, had shown an almost personal interest in the undertaking, admiring the "thoroughly British support," as they termed it, the council had met with in combating the disastrous results the company had met with from their grantees' mismanagement. On the present occasion, he would have to request the shareholders present to sign the *process verbal*, and their signatures must be sworn to before some person having weight with the Prussian Government—in

deed, he might say before the Prussian Consul. This might appear to many a troublesome and needless formality, but it was absolutely necessary, if they were to do anything. It was provided by the Prussian law that the council could not dispose of an inch of the company's property without the written consent of the majority of the shareholders. He did not say that they intended to; but this law prevented the possibility of the directors doing anything without the consent of the shareholders. They had heard from the report that their faith in the mines was unshaken, and he was glad to say that, for the last month, they had paid expenses. A contract was pending with Mr. Hamacker, who was one of the largest holders of blast furnaces in Prussia. Before they proceeded with the resolutions, he would observe, that the reason of the report not being printed before the meeting was because the law required that it should be first submitted to the shareholders and approved.

A SHAREHOLDER enquired whether in the event of their forfeiting the shares of those gentlemen in arrear, the company would be inconvenienced for want of money?

The CHAIRMAN said they might be in want of money; and, as he was of opinion that the defaulters should not reap where they had not sown, he was desirous of getting all shares in arrear as speedily as possible. They had sufficient capital to go on with at present. If they were to issue the preference shares in the ordinary form, the holders of those shares would only, in the event of winding-up, be upon an equality with the other shareholders. This he was desirous of preventing, and they had, therefore, drawn up such a form that the preference shareholders would come under the category of creditors of the company, and therefore have first claim. He did not for a moment contemplate the winding-up of the company, but yet he considered it advisable to protect themselves. If the mine were to be sold to morrow they would be paid first after the mortgage. As to the absolute necessity of having the shareholders' signatures, he could assure them that the bergamt were very careful

of the interests of the shareholders, and when we went there, although they fully recognised him as Chairman of the company, they refused to allow him to do anything without the expressed consent of the shareholders.

The CHAIRMAN observed that, although those letters had been read, it was *against his wish*. In his opinion, Mr. Whyte deserved the greatest praise for his conduct and business habits. He believed him to be as hardworking and painstaking a man as the company could have engaged. He could not say too much in favour of Mr. Whyte, yet he thought that in the present instance he was too sanguine. He was confident that Mr. Whyte wrote nothing but what he believed to be correct, but he also recollect how frequently they had had letters sent to them which had not been realised. Previous to the engagement of Mr. Whyte, his colleague, Mr. Pattar, had taken every care to make enquiry as to his qualifications. Mr. Müller had expressed his determination not to have an Englishman after Mr. Hodgeskin, but Mr. Whyte was only two days in the company of Mr. Müller before he had gained his good graces. Mr. Müller was slower in his decision, but ultimately asserted that he was really more favourable to the appointment of Mr. Whyte than he was to his friend who, in the first instance, he had recommended. Again, he said, "do not build upon your hopes upon the letter;" he believed it, it was true, but did not build upon it, they had been often disappointed. They had appointed Mr. Huland, who, although they at first considered was wanting in integrity, they now found was strictly honest. He would, therefore, openly assert that their suspicions relative to that gentleman were entirely without foundation.

It was then resolved unanimously (and the resolutions signed by the shareholders present, in accordance with the laws of Prussia), that the director's report be received and adopted; that the directors be empowered to defend actions brought against the company by recusant shareholders, and to dispose of such mines as they may deem desirable; that the company's mines be worked under the Prussian law of May, 1853; that the signers of the report authorise each member of the council, Mr. Whyte, of Derschig, and M. Neissen, of Brussels, to represent them in defence of their rights; that the directors be authorised to claim new concessions, and to oppose all concessions tending to infringe the rights of the company; that Major G. L. Way and Mr. H. M. Kempehead be elected members of the council in room of Col. the Hon. H. B. Dalzell and Herr W. Illig who retire by rotation; and that the preference bonds, as proposed by the Chairman, be issued to those entitled in them. A vote of thanks to the Chairman terminated the proceedings.

The SECRETARY read the notice convening the meeting.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN said, since the last meeting he had communicated with Major Farrel, that it was the unanimous opinion of the shareholders to reject the proposal for the purchase of the company's debt on the Hayas Mine; and also informed him that it would be necessary to submit any other offer to the shareholders previous to Major Farrel giving his consent to it. The SECRETARY then read the following report:

The directors having so recently, at a special general meeting of proprietors, laid before them their report upon the mining operations of the company to the latest date then received—namely, the 14th of April last—have, at the present half-yearly meeting of shareholders, only to advert to the particulars contained in the despatches since received from Guanajuato.

JEAN MARIA Y JOSE.—The new shaft of Santa Maria, on June 13th, had reached a depth of 190 varas, the rock continuing favourable for driving; the communication with the lower workings, at the depth of 225 varas, being looked for in September, if not before. The pozo of San Maximino had been carried on under very promising circumstances, the direction of the lode continuing the north-west, and still favouring the idea that it is the great vein of La Luz. The extraction of ore from this work had remained the same in quantity, and had improved in quality. The pozo having shortly after been turned into a frenta, was still in good ore; and, in the north-west direction, this frenta had a width of 2 varas by 3 in height, the extraction averaging 12 to 18 varas daily. The debt due to the company from this mine is \$236,471 2.

LA TRINIDAD.—Nothing material respecting this mine had occurred. The operations had been limited to the prosecution of the San Arcadio, and the pozo of Jesus, which is to serve as a road to communicate San Arcadio with the lower workings of San Rafael and Dolores. In the pozo of Jesus the rock was very hard, and the narrow strip of ore which was against the upper wall had almost disappeared. Only 4 varas have been excavated during the last five weeks in this pozo, but between the frenta and cross-cut of Dolores 26½ varas; favourable appearances, now and then a stone of poor ore, are all the results at present. The debt due to the company from this mine is \$151,249.

ALDANA presents no new feature to comment upon. The mine is only being kept from dereliction. The debt due to the company is \$120,687 7 4.

YAYAS.—The loss on this mine during the five weeks of May had diminished to \$1474 7, and for the first 14 days of June had showed a profit on the workings of \$00 5 7. The debt due to the company is \$22,939 0 4.

ZACATECAS INDEMNITY.—The directors have to announce no further payment as yet from the Mexican Government. The debt due to the company is \$48,504.

The following is the Mexican statement of receipts and expenditure for the year ending Dec. 31, 1855:—

RECEIPTS.

Amount received from the Mexican Government, on account of the Zacatecas claim	£43,313 7 7
Capital supplied from England	26,373 6 0
Quicksilver—profit on this account	687 5 2
Hacienda of Dolores—profit on this establishment	12,134 7 4
Interest—received on sundry accounts	511 6 0
Exchange—for premium on bills	3,525 0 7 = £60,547 1 4

EXPENDITURE.

Legal charges	£ 623 4 0
Expenses of management, agencies, commissions, &c.	21,135 7 1 = £1,710 3 1
Outlay on the following mines:—	
Mine of Almaden	5,161 0 0
Mine of Jesus Maria	567,139 4 1
Less value of produce	25,198 7 5 = £4,910 4 4
Mine of La Trinidad	51,203 5 6
Less value of produce, \$11,252 3 3, and Mr. Purbeck's moiety of outlay, \$19,975 1 1	21,237 4 4 = £10,975 1 2 = £7,975 1 5

FINANCES IN LONDON.—The following is the audited account of receipts and payments from Dec. 31, 1855, to June 30, 1856:—

Brought from audited account to Dec. 31, 1855

£10,800 0 2

RECEIPTS.

Transfer fees	52 12 6

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driving the lode was never seen without good stones of copper ore, and in the driving of some fathoms we have met with some rich bunches of yellow copper ore of good quality. Stones of copper have been broken in this driving, weighing upwards of 120 lbs. Such a lode, at so shallow a depth, is rarely to be met with in the two counties. Large stones of copper are now to be seen in the bottom of this level, and they are dipping towards the shaft; consequently, as the shaft deepens under the 40, I have every reason to believe our labours will be crowned with success, and I do not scruple to say that in my opinion it will be highly improbable this lode can fail at a deeper point to turn out thousands of tons of rich copper ore. We are now about 40 fathoms deep in Karkee's shaft, and the lode is from 5 to 6 ft. wide, and has continued its size from the surface. You will have seen by my last week's report, that this lode has considerably improved within the last ten days, and is composed of fluor-spar, crystallised iron felspar, mica, and large spots of grey copper ore. In fact, the lode in the bottom of the shaft is spotted throughout with grey copper ore. The water issuing from the lode is so charged with copper that within a few hours the miners' tools are quite corroded with copper, what the miners term "greens." It is the opinion of all who have visited the Great Tregue Mine that it will exceed the appearance of any lode opened in the district, and it only requires the sinking of the shaft to a deeper point to reach a rich mass of copper ore. I cannot speak in too high terms of this mine, and if I write the facts, I must tell you I cannot, wherever I go, see a more safe speculation in the two counties.—John Sparge.

The balance-sheet showed the following statement of accounts:—

Balance at bankers on Feb. 1 last	£123 8 3
Shares issued, and paid on to this day	811 0 0 = £934 8 3
Mine cost, from Feb. 1 last to July 28, 1856	716 11 0
Balance at bankers	£166 17 3
Shares taken and in course of payment	578 0 0

Total balance in favour of mine £744 17 3

The CHAIRMAN, in moving the adoption of the report, said it might strike some of the shareholders that it was not a very favourable one, after the flattering accounts they had previously had laid before them. The directors were ready to admit that their former reports, although they believed the statements contained in them were perfectly warranted at the time, from the appearances of the mine, and the information they received, were not altogether, up to the present moment, borne out; for unexpected delays had taken place, as all of them knew very frequently did take place in mining operations, in which, in fact, it was impossible to foretell the results that might be forthcoming. The directors had, therefore, on this occasion refrained from giving the shareholders so strong a report as the existing condition of the mine would justify, and they thought it better to simply lay the facts before them, so that they might judge for themselves. The directors felt that the mine had assumed such a position that it could run alone, and that it did not require any pumping. The board were most anxious to afford the shareholders every information in reference to the undertaking, so that they might have the same means as the directors themselves of coming to a conclusion respecting its value. He thought that the report of Capt. Sparge did not read less favourable than those he (Capt. Sparge) had already laid before them. Capt. Sparge was present, and would be happy to answer any questions the proprietors might think proper to put to him. The travelling expenses and banker's commission had amounted to £22, and this included the expenses incurred by the secretary during three visits he had made to the mine, as well as the visit of Mr. Hobler. It was to be borne in mind that the cheapest mode of conveyance to and from the mine would cost something over £1. The directors had found it better and more economical to send a gentleman down to the mine occasionally than to have an established agent on the mine.

In answer to a question from a proprietor, the CHAIRMAN said that there were 520 shares in reserve. These would give the company another 1000, and the directors thought that with such reserve there was ample money to fully develop the mine.

A PROPRIETOR enquired the amount of liabilities?

The CHAIRMAN: As far as it can be possibly ascertained, it is about £600, or (say) in round numbers, 2000, in addition to the daily working of the mine.

A PROPRIETOR: And we have, you say, 520 shares in reserve in case of need?

The CHAIRMAN said, precisely so. He might observe that their liabilities, which some time ago were considerable, had now been reduced to what might be almost a nominal sum (cheers); and if the shareholders thought it imprudent to carry on the mine any longer, they could abandon it, and have a balance at the bank.

He did not think he should vote for such a measure himself.

The report and the statement of accounts were, upon the motion of the Chairman, unanimously adopted. A short conversational discussion then took place, during which great confidence was expressed in the ultimate success of the undertaking.

A cordial vote of thanks to the Chairman and directors closed the proceedings.

CHARLES SANDERSON'S PROCESS FOR REFINING AND IMPROVING THE MANUFACTURE OF IRON.

The object of refining iron is to deprive it of the deleterious matter it may contain, and also a portion of its carbon. To effect this, the usual plan is to melt pig-iron upon coke, with the addition of a strong blast, the oxygen of which acting upon the fluid iron which is mixed with the various alloys, oxidises them, and during the time necessary to decarbonise the metal a quantity of slag or cinder is formed, containing 60 or 70 per cent. of iron, thus causing a great waste of metal, varying from 2 to 4 tons per ton. Besides this loss, the metal so produced is not uniform in quality, sometimes being too much blown, and at other times too little, thus affording no means of obtaining a regular quality of malleable iron. Coke is used as a fuel, which is expensive, and the necessity of using a strong blast increases materially the cost of production. The objects of this process are—

1. To reduce the loss of metal, and to use coal as fuel instead of coke.

2. To effect a uniform decarbonisation of the pig-iron without the aid of blast.

3. To use a chemical re-agent capable of giving out oxygen during its decomposition, which taking up and uniting with the carb., evolved from the metal produces carbonic oxide gas, which acting upon the earthy compounds contained in the pig-iron precipitates the metal contained in them.

4. To eff. of a greater facility, and also to produce a greater economy in the cost of manufacturing refined metal, by decarbonising it, and at the same time clearing away the unrefined or earthy matter with which pig-iron necessarily becomes mixed during its descent through the blast-furnace; and, further, to effect an economy (by using a purer metal so obtained) in the manufacture of malleable iron, causing less waste in puddling, and also in the subsequent re-heating required for producing bar, rod, or sheet-iron.

The furnace used is a common reverberatory, having a bed large enough to contain 2 to 3 tons, or even more, of fluid metal. The crude iron may be operated upon either by melting pig-iron upon the bed of this furnace, or by drawing it direct from the blast-furnace. When the metal is melted and at rest, the slag must be skimmed from the surface, and a chemical re-agent is added, capable of disengaging oxygen during the decomposition. Carbonic acid, or carbonic oxide gas, will be produced by the decomposition of this substance, and by the union of the oxygen contained therein with the carbon contained in the fluid iron from which it is eliminated, the gas produced being unable to re-enter the metal, either pass off in vapour, or act upon the silicates or other earthy compounds which the crude iron may contain, precipitating the metallic part, and allowing the earthy matter to flow away as slag, containing comparatively but a very small per cent. of iron. Thus, by adding such chemical re-agent, which by its decomposition will evolve elements capable of combining with the carbon contained in the iron, and of producing carbonic oxide gas, which, going upon the earthy compounds, and other deleterious matter contained in the iron, causes such deleterious substances to separate from the iron, obtaining very clean, pure, crystalline metal, capable of being manufactured into superior malleable iron.

Many hundred tons have already been refined by this process direct from the blast-furnace, and also by re-melting the crude iron; in both instances the result has been uniform—the loss in metal not reaching 100 lbs. per ton upon re-melted iron, or 60 lbs. upon that operated upon in a fluid state from the blast-furnace. The malleable iron is also very materially improved in quality, being entirely freed from red shortness, and when broken cold, presenting a clean, tough, elongated fibre. The loss in puddling averages 84 lbs. per ton, taken upon a furnace working 12 days; and a proportionate waste is experienced in the mill furnaces, according to the kind or size of iron required.

For producing a variety of castings, it has also been found very useful, giving them greater strength, arising from the discharge of the earthy matter contained in the pig, and bringing the metallic particles in close contact.

[Some remarks on this invention appear in another column.]

IRON TRAMWAYS FOR COMMON ROADS.—Mr. B. H. Babbage read a paper before the Adelaide Philosophical Society, on a new adaptation of iron tramways to common roads. The author, after having given some interesting information on the subject, stated that he proposed to lay down upon such fountains as would require under existing circumstances to be "metalled," a wrought-iron tramway, having a sufficient surface to enable all ordinary vehicles to use it, with a slight guiding flange, to assist in keeping a vehicle on the tramway, but not so high as to prevent the wheel readily crossing it, to avoid a coming vehicle, or pass a slow coach.

The arrangement consist of two longitudinal plates of wrought-iron, varying from $\frac{1}{2}$ in. to $\frac{1}{4}$ in. in thickness, according to the amount of traffic, having on each side of them a low rounded flange of iron, about 1 in. wide and $\frac{1}{2}$ in. of an in. in height.

In the centre of the underside of each plate is a low rounded flange, of 1 in. depth and 1 in. breadth, to strengthen the middle of the track; where the greatest amount of work will take place, the ends of the plates are cut perfectly square, and rest upon wrought-iron saddles, 1 ft. 4 in. long and $\frac{1}{2}$ in. thick, to which they are riveted with 1 in. rivets, put in whilst red hot. At each saddle there is an iron tie bar made of angle-iron, the horizontal flange 3 in. wide and the perpendicular one 4 in. deep, both being $\frac{1}{2}$ in. thick. This tie-bar is bent in the centre, so that it may be conveniently covered by the broken stone with which the centre of the roadway would normally be ballasted. Each end of the tie-bar is securely riveted to the saddles and plates by two rivets. A notch is cut in the upper flange of the tie, to receive the central web of the saddles, which are made to fit exactly to the web on the underside of the rails. The weight of the yard run would be under ordinary circumstances 120 lbs. per yard, calculating the iron at 127 lbs. per ton, would be about 17. 14. 3d. per yard for rails, 3 lbs., at 10. 10s. per ewt., 3d.; riveting, ledging, and packing, 2s. 6d. per mile. If the thickness of the iron plates were reduced to 1 in., the total expense would not exceed 3000/- per mile; whilst the maintenance would cost considerably less than an ordinary metalled road.

DUST IN RAILROAD CARS.—The New York Central Railway has nearly

reduced the dust in its railroad cars to a minimum, by the use of closed doors and windows, manage to intrude itself upon travelers inside.

The plan is simply to box in the running gear down to within two or three inches of the rail, and to extend tarpaulins over the open space between each car. Advantage is also gained in deadening the sound of the wheels.

TUNNEL BOILER.—Mr. O'Regan has invented a new tubular boiler for marine-engines, the novelty of which consists in the tubes being placed vertically, and filled with water. The furnace occupies the same position as in the common boiler, but the flame passes from the furnace to that portion of the flue in which the vertical tubes are placed, and these are so arranged as to check the current of heat, while a large area is left for radiation. By this means is secured a two-fold mechanical distribution; first, of the water to be heated; and, secondly, of the heat by which steam is generated. The tubes, being constantly filled with water, are protected against heat, and will keep themselves free by the action of the boiling water, which must pass through them.—*Liverpool Albion.*

THE CHANCELLORSVILLE FREEHOLD GOLD MINING COMPANY.

The Directors of the Chancellorsville Gold Mining Company at length find themselves in a position to make a statement to their shareholders, on their own past proceedings, and on the present position and future prospects of the company.

After having encountered and overcome great difficulties, they are happy in being able to announce that they have arrived at complete success.

The question of quartz reduction has lately assumed a great importance. Of the vast importations of gold into this country, the portion which shows a progressive increase is that which comes from the quartz; but the reduction is still effected with great difficulty and expense, and at a considerable waste of the precious metal. One of the problems of the time is to unlock the treasures which lie undeveloped in quartz formations in various parts of the world, and to make them available for the increase of the general stock of gold. The directors of this company believe that they do not arrogate too much to themselves, when they express their conviction that they have succeeded in removing many of the obstacles that stood in the way of a solution of that problem.

ORIGIN AND OBJECTS OF THE COMPANY—NATURE OF THE PROPERTY.

This company was formed about three years since for the purchase of the Grassy Estate, in Orange county, Virginia, and for the extraction of gold from the valuable quartz with which that estate abounds. At the outset the directors dispatched to Virginia, Mr. W. T. Henwood, F.R.S., F.G.S., &c., author of "The Metaliferous Deposits of Cornwall and Devon," a mining engineer of high character. Mr. Henwood was formerly her Majesty's assay master and supervisor of tin in the Royal Duchy of Cornwall, and secretary of the Royal Geological Society of Cornwall. He was subsequently chief commissioner of the Imperial Brazilian Mining Association in Brazil, and more recently he was employed on a special survey mission by the Honourable East India Company. These credentials sufficiently establish the fitness of Mr. Henwood for the duty he was appointed to perform.

MR. HENWOOD'S REPORT ON THE ESTATE AND MINE.

After two visits, and a careful survey of the property, Mr. Henwood made a report which was printed at the time. He there stated the following particulars:—

"The Grassy Estate is situated in Orange County, Virginia, about 25 miles west of Fredericksburg, on the Rappahannock. It is bounded on the west by the Plank road, and for some distance on the north by the old turnpike road between Fredericksburg and Orange Courthouse, which will be shortly connected by a line of railway in course of construction, and will pass within half a mile of the western limit of the property. Both these places now communicate with the Potomac by rail, the former at Aquia Creek, the latter at Alexandria, and Alexandria is to be shortly connected with the great lines of intercourse between Washington and the northern, eastern, and western parts of the Union. The property, can, therefore, scarcely be exceeded in facility of communication, as well with the west as with the interior.

The greatest length of the estate is about a mile and a half from east to west, and its width is perhaps half a mile from about north to south. The boundary, however, is irregular, and much indented; its surface is gently undulating, the difference between the elevation of the highest and lowest grounds probably little, if at all, exceeding 100 ft.

The area is 439 acres, of which 100 acres, or thereabouts, are cleared and partially cultivated. About 200 acres are covered with a heavy growth of magnificent oak and other valuable trees, and the remainder bear stunted pine and brushwood, which serve for fuel. Near the dwelling-house there is a small marshy declivity, and in the western part of the estate several depressions have each a rill. These unite within the boundary of the property, and their stream, although scarcely enough for cleaning ore by the ordinary washing processes, is ample for the supply of amalgamating apparatus.

There is a very good dwelling house, a tolerable one of smaller size, nine cottages, smiths and carpenters' shop, store house, barn, stable, and several small out-houses,"

Referring to the auriferous formation of rocks on the estate, Mr. Henwood added:—

"The rock is of a talcose slate, sometimes very closely resembling clay-slate. It is generally soft, of a pearl-white or very pale blue in some places, and light buff in others; but many portions are deep red, occasionally passing into brown—an aspect not uncommon in other auriferous districts. The structure is, on the whole, thick lamellar. The strike of the cleavage planes is about 35° E. of N. and W. S. (magentic), and their dip from the horizon is 70° to 85° towards the N. W."

Masses of potstone appear at intervals, and seem to run parallel to the lamination of the slate rock. They probably form the continuation of a similar formation, which is observed in a like position beyond the limits of the property eastwards.

Just within the belt of forest which covers the northern boundary of the estate, a large range of quartz rock is traced for some distance, and in the same direction with the strike of the potstone and of the schistose rocks. No operations have ever been instituted on it, but if other parts of the estate are wrought, I think this ought not to be passed without trial.

At the north-western fence of the cleared land enormous blocks of quartz are abundantly scattered over the surface, in a line coincident with the range of the rock formations; and still farther within the enclosure, southward, two other parallel ranges of similar stones are still more plentifully traced. Although we nowhere see the parent rock of these surface blocks, there is, I think, little or no doubt but that they mark the vicinity of parallel quartz deposits, to which further attention should be directed.

Still south, on the elevated ground, about 200 fms. north-west of the house, an enormous quartz formation crops out, and may be traced in the same direction with the others for perhaps 100 fms. in length. Large masses of the same rock also appear *in situ* on the same line of bearing through the length of the estate, but separated here and there by copes and cultivated land. As its junction with the talc-slate is not visible, it is impossible to ascertain the exact breadth; a width from 20 to 30 ft. is, however, exposed, and broken stones of it cover the surface for double that extent. It is from this formation that the specimen of gold in your possession was obtained. At 150 fms. from the western boundary of the estate, within a fine tract of virgin forest of great beauty, there is a similar quartzite formation, containing earthy brown iron, and small pieces of talc slate, which has considerable resemblance to the formation formerly wrought, whence your samples of ore were taken. Of the probability of giving this part of the property more examination than it has yet been subjected to I think no doubt can be entertained.

About 100 fms. still southward, near the marshy declivity already mentioned, and immediately in front of the best dwelling, another large quartzite deposit crosses the south-eastern angle of the estate for perhaps 150 fms. in length. Its width cannot accurately be observed, but in position it conforms to the lamination of the adjoining slate. The siliceous matter is more or less mixed with portions of slate, and it encloses some iron pyrites and copper pyrites, but these are not abundant; earthy brown iron ore is, however, plentiful in many parts of it.

It has been partially wrought for about 100 fms. in length, but most of the shafts have been sunk only about 6 fathoms in depth, and the deepest of them is only about 15 fathoms.

The quantity of rock at the surface is about 500 or 600 tons. It was from the ferruginous portions of quartz remaining that the samples you have assayed were obtained, and during my last visit to the property I also made some examinations of the ore, which, defective as they necessarily were from the rudeness of the implements I found on the spot, afforded gold in ample remunerative proportion to the quantity of stone submitted to experiment.

This deposit is so little seen *in situ* that it is impossible to estimate the quantity of ore contained in any given extent of ground, the samples assayed, however, leave no doubt that it deserves more examination than it has yet received.

These extensive formations of quartz coincide in position with the laminae of the rocks, of which, in fact, they doubtless form members, and they differ from the schistose varieties only in being more siliceous, and in exhibiting fewer traces of slate cleavage."

As the foregoing report was made more than two years ago, on information obtained some months before, it may be a satisfaction to the shareholders to have a confirmation of them in general terms, made on June 22 of the present year, by an eye-witness, the company's own agent, a gentleman of the highest character and respectability, who was dispatched to Virginia on a special mission to make arrangements for the practical working of the mine, and the transmission of the ore to this country. This gentleman says:—

"I have made an examination of the property, and find that there is an endless supply of quartz, with indications of great richness. The master vein, which runs for upwards of a mile through the centre of the estate, remains untouched, and the surface indications (rich gossan, and dark, reddish, brown quartz) lead me to suppose that it is much richer than any which has yet been tried. The width of the vein averages about 40 yards.

There are several other veins, running almost parallel to the one alluded to, but not of the same width or length. There is an abundant supply of timber, principally oak: I believe about 200 acres, richly covered. Also, about 100 of pine. The railway to Fredericksburg will run within a few hundred yards of the estate, which will, of course, greatly facilitate the communications and render the expenses much lighter."

Thus, the original statements of promoters of the company and the engineer are fully borne out, and the value of the property remains unimpaired at the present hour.

IMPORTATION OF ORE FOR REDUCTION.

Between the original formation of the company and the early part of the last year there was a period of comparative inactivity. Nothing but the confidence inspired by the report of Mr. Henwood, the oral statements of other gentlemen who had visited the property, and the results of the assays made by Messrs. Johnson and Matthey, Mr. Mitchell, Mr. Claudet, Dr. Ryan, Mr. Wright, Mr. Edwin Smith, Dr. Collier, and others, could have sustained the directors against the discouragements and disappointments they encountered. All undertakings of the kind gradually fell into desuetude. Changes also took place in the constitution of the company itself, which was at one time almost threatened with extinction; but the remaining directors and some of the officers adhered to its fortune under all vicissitudes, until they trust they will have earned the acknowledgements of the shareholders for their faith and perseverance.

All the efforts of this and other companies to effect, on their several mines, the extraction of the gold from the ores having at that date proved unsatisfactory, the directors of the Chancellorsville Company determined, about a year and a half ago, to bring over to this country a considerable quantity of the ore, so that they might have under their own eyes and those of their shareholders, the benefit of the best scientific and practical knowledge on the subject of quartz reduction. Inevitable obstructions and delays retarded for a considerable time the accomplishment of this resolution; so that it was not until the close of last year that the directors received their first consignment. Shortly after they received another, a smaller consignment. Both were advertised at the same time.

With confidence unimpaired in the value of the mine, the directors now flattered themselves that their task would in future be comparatively easy. Those only who have had to encounter the difficulties surrounding the subject can comprehend why so much delay, nearly nine months, has nevertheless occurred. The ore of this mine contains very little visible gold; and the precious metals which abound in it exists in particles so fine as to require the most elaborate treatment. So much time having elapsed since the first assays already referred to, the directors considered it desirable at the outset to ascertain by the same means the value of the ore. They were well aware that their greatest difficulty would be to obtain machines capable of crushing and amalgamating or otherwise extracting the gold, on such a scale as would confirm the tests of the assayers.

RESULTS OF THE TESTS.

The directors invited the co-operation of scientific and practical men who had studied the subject. The results of their experiments were very unequal; some of them encouraging the most extravagant ideas of profits, but few being below such a yield as would give a dividend, if the undertaking were rationally regarded as a fair commercial enterprise. It would answer no purpose to embody in this report the certificates in detail of the gentlemen who made the different experiments; but some notion may be formed of the uncertainty in which the directors were from time to time placed, from the following examples. For instance, on November 23, 1855, Mr.

Claudet, of the assay-office, Cannon-street (who had previously tested some of the ore with less favourable results), certified that the iron pyrites, with which the ore abounds, contain from 34 to 39 ounces of gold to the ton of pyrites, and 65 ounces of silver to the ton. At the same date Messrs. John Taylor and Sons, of Upper Ordinance Wharf, certified per Mr.

than that already sent, I arranged for the immediate shipment of 50 tons of this ore, which is now on its way to this country. As I have already stated, a railroad is in course of construction, which passes within a quarter of a mile of the estate, going direct to Fredericksburg. This railroad will be completed in a year. When it is opened, the cost of transmitting the ore will be about 2s. or 2s. 6d. per ton. For the present it must be sent by the plank road, at a larger expense. Hitherto the ore of the company has been sent by coasting vessels to New York from Fredericksburg, and from New York to England. The result of my enquiries was to satisfy me that, at a future time, it might be an economy to the company to charter vessels of about 150 or 200 tons, which could ship the ore at Fredericksburg, and land it at Frodsham-bridge, on the wharf of the company, thus avoiding the expense attendant on transportation. At present the cost of freight from Fredericksburg to New York is 5s. per ton. The cost from New York to England is \$3 1/2 per ton, or with commission fees at New York \$3. At present it is necessary to adopt the New York route. I arranged with Mr. Phillips, the shipping agent at Fredericksburg, to receive all ore forwarded from the estate, and to ship it to New York. At New York, in like manner, I arranged with Mr. Lancey, of the European and Express Agency, to re-ship to Liverpool the ore so received from Fredericksburg. In conclusion, gentlemen, I have only to say that the result of my mission has been to convince me of the value and capabilities of the mines upon your property. I am, gentlemen, your obedient servant,

(Signed) ROBERT B. THOMAS.

"There is on the estate about 200 acres of fine timber, principally oak; also 100 acres of pine."

PROSPECTS AND ESTIMATED PROFITS OF THE UNDERTAKING.

It will have been seen from the foregoing statement that some weeks must necessarily elapse before the operations of the company will be in full working order. But the directors now know enough of the conditions under which they will be called on to be able to form a definite estimate of the future.

The ore hitherto received in this country has been indiscriminately by the parties on the spot. Nevertheless, from this ore, which is inferior to the average production of the estate, the results already rendered have been obtained. The directors prefer to base their calculations upon the smallest ascertained yield in bulk, rather than upon that which they sincerely believe will be ultimately produced. They take, therefore, as their ground work, a yield of 1 1/2 oz. of gold to the ton (see Mr. Henry's report). At present they do not add any estimate of profit from the silver abounding in the ore, the arrangements for its separate extraction not being yet perfected.

The machinery already in the company's possession, or in course of construction, will reduce 246 tons per week, and the extent of the premises at Frodsham affords ample scope for such increased operations as may be determined upon. The company propose to bring over the ore at convenient seasons, and to store it up at Frodsham, so as to maintain a continuous supply.

The position and conformation of the veins of quartz are such as to permit the employment of any number of men, distributed at different points. No heavy machinery is required for this purpose, as all the necessary work can be done by manual labour, under the personal superintendence of Capt. Hoskins, the well-known mining captain, who has had a large experience in mining operations, and with whom arrangements have been made to leave this country, with a staff of miners, before the close of next week.

The directors have now ascertained that the expenses of raising, land and water carriage, and reduction at Frodsham, will be under £3 per ton.

The following, therefore, will be the result at the before-mentioned rate of 246 tons per week:

246 tons per week amount to 12,792 tons per annum.
12,792 tons, yielding £5 10s. per ton (gross returns) £70,356
(Taking the price of gold at £3 15s. only. But this gold fetches a higher price (£4 4s.) on account of its purity).
Cost of reducing 12,792 tons, at £3 per ton 38,376

Nett annual profit on the ore £31,980

Thus it is shown that the operations of the company will yield a nett annual profit of more than 50 per cent. on the whole capital of £50,000, after paying the royalty, and the staff expenses in England and on the estate.

This estimate, however, assumes that the yield shall be only 1 1/2 oz. to the ton, and that the operations shall be limited to 246 tons per week. But all ascertained results tend to show that the yield will be much greater. That the calculation of quantity is very moderate, is attested by the fact that the St. John del Rey Company reduce upon the average more than 80,000 tons annually.

The directors have no desire to indulge in anticipations which might appear extravagant or delusive. They would merely remind the shareholders that they have not included the profit on the silver (the yield of which is calculated at 20 ozs. to the ton of ore, attainable at a cost of £2 per ton, and leaving a surplus of £3 per ton), or on the sale of the finely-grounded refuse, which, in the opinion of practical men, will pay nearly all the expenses.

All possible economy has been exercised in the expenditure necessary to arrive at the foregoing results; and the directors feel assured that the operations at their works will be sufficiently advanced to enable them to make their first half-yearly statement to the shareholders before the close of the present year.

The directors are happy to be able to repeat to the shareholders that the original capital of £50,000 is more than sufficient for all the requirements of the undertaking.

By order, W. S. TROTTER, Sec.

1, Great Winchester-street, July 26, 1856.

Copies of this statement may be obtained at the office of the company.

TREBURGET CROWN CONSOLIDATED COPPER MINING COMPANY (LIMITED BY ACT OF PARLIAMENT). SITUATE IN THE PARISH OF CROWAN, THE BEST MINING DISTRICT IN CORNWALL.

Capital £50,000, in 5000 shares of £10 each. —Deposit £5 per share.

The old shares of £1 each in the Treburget Consols Mine will be received in exchange, and in payment of the deposit of £5 per share.

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These mines are situated in one of the richest copper strata in the county, and are upwards of 1200 fms. in length, and 400 fms. in breadth on the course of the lodes; they adjoin and run parallel to the celebrated Wheal Abraham, Outlands, and Creveret sets, from whence immense quantities of ore have been raised, and great profits realised.

The stratum is clay-slate, of the same character as that of Wheal Abraham, being on the same geological formation. Wheal Abraham was found rich in ore to full 200 fms. deep, and the opinion of the experienced mining captains, by whom the Crown Mines have been inspected and reported upon, is that they will be found equally productive to a similar depth.

There are six well defined and known lodes in the sets. Wheal Curtis lode has been worked to a depth of 47 fms. below the adit level, and upwards of £10,000 worth of ore have been raised. The Wheal Dumpling lode, which is 60 fms. south of Wheal Curtis, is sunk 27 fms. below the adit, and a level therefrom has been driven 40 fms. east of the shaft, through excellent tribute ground. This lode presents the certainty of proving a rich mine. Another lode intersects the Curtis and Dumpling lodes, and is about 4 fms. from the surface, where it presents a very fine gossan. There is likewise another lode south of Wheal Curtis, called the Drym lode, which has a promising appearance, and produces a splendid gossan. The remaining two lodes have not been opened upon, though their position and character have been ascertained.

The capital of the company is £50,000, divided into 5000 shares of £10 each, whereupon a deposit of £5 per share is to be paid, and the remainder called for as required for the mining operations, by instalments not exceeding 2s. 6d. per share, and that at intervals of not less than three months.

The company will be under the management of a board of directors, each of whom must be the holder of not less than 20 shares during his term of office. Periodical statements of accounts and reports will be submitted to the shareholders, and meetings of the proprietary duly convened, according to the Deed of Settlement constituted under the provisions of the Limited Liability Act, by which the liability of the shareholders will be strictly limited to the amount of their share.

Abstract of prospectus and reports may be obtained at the offices of the company.

WILLIAM EVANS, Sec.

FORM OF APPLICATION FOR SHARES.
To the Directors of the Treburget Crown Consolidated Copper Mining Company (Limited).

GENTLEMEN.—I request you to allot me shares in your company, of £10 each, on which I enclose you a deposit of £1 per share, and hereby undertake to accept such shares, or any less number, and to pay the further sum of £4 per share on allotment, and the further calls as required, up to £10 per share, subject to the provisions of the Act of Parliament which limits liability to shareholders.

I am, Gentlemen, your obedient servant,

Name in full
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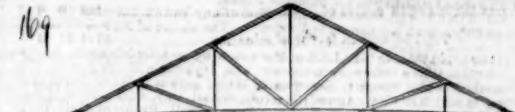
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